

SQL Server Locking Internals

By

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Amit R S Bansal

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- **Corporate Trainer/Consultant & Evangelist**
- **Conducted more than 450+ workshops on SQL Server & BI for top notch IT companies world wide**
- **Microsoft MVP for SQL Server**
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- **Technical Reviewer/SME – MSL courses & certifications on SQL Server**
- **Co-Founder & President – SQLServerGeeks.com**

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Agenda

- Gyan through demos !
 - Convert status
 - Conversion Lock
 - READ UNCOMMITTED myth
 - Intent Locking
 - Lock escalation
 - Partition-Level locking

request_status = Convert

request_status
GRANT
GRANT
GRANT
GRANT
GRANT
GRANT
WAIT
GRANT
GRANT
GRANT
GRANT

request_status
GRANT
GRANT
GRANT
GRANT
GRANT
GRANT
GRANT
CONVERT
GRANT
GRANT
GRANT
GRANT

Demo

Conversion Locks

- (SIX)
- (SIU)
- (UIX)
- Happens when SQL Server already holds a lock at coarse granularity but now wants a lock at finer granularity.

Demo

Myth about READ UNCOMMITTED

- READ UNCOMMITTED – neither does it ask for any locks nor does it honor any locks !
 - True or False?

Demo

INTENT Locks

- What's the purpose?
 - Performance?
 - Deadlocks?
 - Lock Escalation?
 - Latches?

Demo

Lock escalation

- What's the purpose?
- When does it happen?
- Can you disable it?

```
ALTER TABLE Production.Product
```

```
SET (LOCK_ESCALATION = AUTO|TABLE|DISABLE)
```

- trace flag 1221 disables lock escalation completely
- trace flag 1224 disables based on lock numbers
- Should you disable it?

Demo

Partition Level Locking

- New feature is SQL Server 2008
- Does it mean Row -> Page -> Partition -> Table ?
 - True or False?

Demo

Summary

- Convert status
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- Intent Locking
- Lock escalation
- Partition-Level locking

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- Next webcast by Sarabpreet Singh on “Bulletproof Backup & Restore strategy”

Next steps...

- Provide your feedback – you shall receive a mail shortly
- Participate in quiz (on our forums)
 - Your chance to win:



- And yes, lucky winners will be flashed on the site

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Q&A

Thank you 😊

for suggestions, please email at admin@SQLServerGeeks.com